

Notice of Allowability

Application No.

10/671,448

Examiner

Kelly L. Jerabek

Applicant(s)

ODA ET AL.

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Patent Application filed 9/29/2003.
2. ☒ The allowed claim(s) is/are 1-4.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Claims 1-4 are allowed.

The following is an examiner's statement of reasons for allowance:

Re claims 1-4, the prior art fails to teach or suggest, "A method of reading out signal charges from a solid-state image sensor, comprising: a first step of preparing a solid-state image pickup apparatus comprising a solid-state image sensor having a plurality of photosensitive cells arranged in a bi-dimensional array for converting incident light to electric signal charges, **each of the plurality of photosensitive cells including a main region and a sub-region smaller in area than the main region**, the apparatus executing signal processing on pixel data produced from the signal charges; a second step of causing the solid-state image pickup apparatus to perform preliminary image pickup of a scene; a third step of determining a luminance distribution representative of the scene subject to the preliminary image pickup on a basis of pixel data obtained from a plurality of blocks formed in the bi-dimensional array to calculate an estimated photometric value that estimates the scene; a fourth step of comparing the estimated photometric value with a predetermined threshold value, above which a dynamic range is effective which defines a reproducible range of the incident light; **a fifth step of controlling the image sensor, in the estimated photometric value is smaller than the threshold value, to read out the signal charges generated in the**

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main region and the sub-region of each of the photosensitive cells which missing the signal charges with each other for the photosensitive cell; and a sixth step of controlling the image sensor, if the estimated photometric value is not smaller than the threshold value, to read out the signal charges generated in the main region and the sub-region of each of the photosensitive cells individually from each other”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishihara (JP 2000-152259) discloses a solid-state image pickup device and signal read method. The information regarding a photometry control mode is relevant information.

Tamaru et al. (US 2004/0012711) discloses an image pickup apparatus and photometer. The information regarding a solid-state image pickup device containing high-sensitivity and low-sensitivity pixels is relevant material.

Oda (US 6,831,692) discloses a solid-state image pickup apparatus capable of outputting high definition image signals with photosensitive cells different in sensitivity and signal reading method. The information regarding a solid-state image pickup device containing high-sensitivity and low-sensitivity pixels is relevant material.

Goto (US 6,982,759) discloses an amplification type solid-state imaging device having a potential detecting circuit for each unit cell. The information regarding a solid-state image pickup device including unit cells that including first and second photoelectric conversion/storage sections is relevant material.

Harada (JP 09-205589) discloses a solid-state image pickup device. The information regarding an image pickup device in which each light receiving section is divided into two light receiving areas whose sensitivity differs from each other.

Haruki et al. (US 5,111,301) discloses an automatic exposure adjusting apparatus for automatically adjusting exposure by fuzzy interference. The information regarding luminance detection and photometry is relevant material.

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Takahashi et al. (US 6,630,960) discloses an image pickup device. The information regarding luminance detection and photometry is relevant material.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on **(571) 272-7304**. The fax phone number for submitting all Official communications is **(703) 872-9306**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



TUAN HO
PRIMARY EXAMINER